

# The Environmental Impact of Chinese Rural Policies



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*Rufus Bellamy*

[Photo: Rapeseed fields in China.]

Collectivized farms and little red books are becoming a distant memory in China's rural landscape. But the country's transition from a planned to a market economy may wreak more havoc on an environment already degraded by decades of destructive policies, argues [Justin Lin](#), Director of the China Centre for Economic Research (CCER) at Peking University.

"With about one third of the farmland in China endangered by soil erosion, the Yangtze looks set to be China's second yellow river," Dr Lin reported at a recent [Economy and Environment Program for Southeast Asia](#) (EEPSEA) workshop in Singapore. EEPSEA is sponsored by the International Development Research Centre (IDRC) and eight other donors.

## **Environmental destruction**

Soil erosion is just one of many environmental problems facing Chinese rural areas. Others include industrial pollution, soil salinization, loss of soil fertility, and forest destruction. "Although it is not always easy to directly attribute environmental destruction to individual policies, I have been able to show how [the combination of] many different policies have had a dramatic impact on the environment," he said. Dr Lin based his presentation on studies he conducted over more than a decade, work by Fan Zhang and other CCER staff, and the efforts of researchers from other centres across China.

In the early 1950's, he noted, the Chinese government introduced the first in a series of policies that have hurt the environment. In an effort to encourage rapid industrialization, the government set low wages for workers — allowing profits to be reinvested in industry. But to survive on low wages, workers needed cheap food. This, in turn, required massive government intervention in the rural economy.

## **Factory farms**

Based on the assumption that an industrial model of production would improve agricultural efficiency, the government collectivized agriculture into large 'factory farms'. To limit the bargaining powers of farmers, it imposed a state monopoly on grain purchases, which were made

at below-market prices. And to ensure that scarce foreign exchange was used for industry rather than agriculture, the government instituted a policy of food self-sufficiency. Meanwhile, trade between regions was discouraged. Thus, in order to be self-sufficient, each region had to grow crops for which they had no comparative advantage.

According to Dr Lin, these policies lowered the prices paid for agricultural produce, kept productivity low, and forced farmers to exploit land unsuitable for agriculture. "It is quite clear to me now that the grain self-sufficiency policy, in particular, was and still is a great problem, particularly in marginal land areas," he stressed. "These areas should not have crops at all. They should have grassland. For the first two years with wheat it's okay. But then salinization begins and the land becomes a desert." In the 1990's, land desertification increased by 2,100 square kilometres per year in China.

## **Reforms**

Dr Lin conceded that the impact of the government's rural policies was not totally negative: they spurred agricultural research and large-scale irrigation projects, for example. But by the 1970's, reforms were badly needed. In the absence of any real economic incentives, the performance of Chinese agriculture was poor.

In response, the Chinese government re-allocated farmland to individual households and gave farmers more autonomy. Until recently, however, property rights were not secure and so farmers had little incentive to worry about the long-term sustainability of their plots. "This led to mining of the land," said Dr Lin, who added that in the early 1990's, when land use rights were extended to 30 years, the behaviour of farmers improved.

## **Labour costs**

Reforms dating back to the late 1970's also increased labour costs, which caused a drop in the use of organic fertilizers and an increase in chemical fertilizers — resulting in soil damage and higher nitrite levels in vegetables. In some areas of China, nitrite concentrations are now well above average international levels. Moreover, the reforms accelerated industrial development in rural China, which is now the source of worrying levels of pollution. "We have to give up the heavy industry orientation and switch to one that is consistent with our competitive advantage — small and medium labour-intensive companies in the manufacturing sector," argued Dr Lin.

While recent reforms brought rural industrialisation, they have also improved the geographical distribution of grain production. Dr Lin recommends that the Chinese government continue the process of securing the ownership of land, forests, and other natural resources, while eliminating the regional grain self-sufficiency policy altogether.

## **No delusions**

He is under no delusions that change will be easy. "The sustainability of agriculture has been a concept in the mind of the government for some time," he said. "But this is a long term issue and the government has other, more immediate, things to worry about at present. We will be carrying on our research to fortify our policy recommendations, but there is a lot left for us to do."

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